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STAFFING AND EQUIPPING PHASE TWO OF THE NEW  
VALLEY HIGH SCHOOL IN WEST DES MOINES, IOWA

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A Field Report  
Presented to  
The Graduate Division  
Drake University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science in Education

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by  
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VALLEY HIGH SCHOOL IN WEST DES MOINES, IOWA

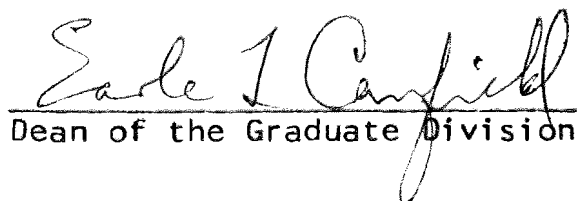
by

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## CHAPTER I

### INTRODUCTION

In 1962, the Board of Directors of the West Des Moines Schools hired the consultant firm of Engelhardt, Engelhardt and Leggett from New York, to study the district. Included in the study were building needs and recommendations. An architectural firm, Savage and Ver Ploeg of West Des Moines, was hired to work with the consultants in designing a new high school. The site for the new high school had previously been purchased by the West Des Moines School District. The district did not have enough money on hand to build the new high school as a complete unit. Therefore, because state law prohibited bonding beyond five per cent of the total evaluation of the district, the building for the new high school was planned to be constructed in four phases as money became available.

The first of four phases of the new West Des Moines Valley High School was opened in the fall of 1965. Since the laws of the State prohibited the West Des Moines School District from bonding for enough money to build a plant large enough to house the entire high school enrollment, the ninth grade was housed in the building and will remain until phase two is completed.

The district went from a 6-2-4 system to a 6-3-3 system at the start of the 1965-1966 school year. This made

the first phase of the new building a part of the junior high school. Grades seven and eight continued to be housed in Stilwell Junior High School with all the ninth graders attending the new building.

When the second phase was opened at the start of the 1967-1968 school year, the new building housed grades ten, eleven, and twelve. The old high school building then became a junior high school and the district now has two junior high schools. This change is expected to greatly relieve crowded conditions in grades seven through twelve.

## I. THE PROBLEM

Statement of the problem. The purpose of this study was to (1) determine how much equipment the new Valley High School of West Des Moines, Iowa would need and (2) determine how many teachers the new school would need.

Importance of the study. Moving a high school program from an old building to a new one requires much study and discussion of several problems. Among these problems is the one concerning the equipment the new building is going to require and the number of additional teachers needed for the new curriculum and enrollment.

The existing school plant, therefore, must be carefully appraised to enable as much of it as possible to be utilized in the future program. Some of the existing facilities, while not now in harmony with future requirements, probably can be adapted to meet those needs.

Such adaptation, when not too costly, must be made part of the planning.<sup>1</sup>

Certain questions had to be answered before the second phase could become operational. Among those questions were the following:

1. What was the planned curriculum for the new school?
2. What new spaces were available?
3. What was the total equipment needed?
4. What was the total staff need?

## II. PURPOSE OF THE STUDY

This study has attempted to provide information concerning additional equipment and new teachers required for phase two of the new Valley High School in West Des Moines, Iowa. Information has been collected and recommendations have been made in the area of additional equipment and teachers that appeared necessary.

## III. PROCEDURE

First, a review of literature available in the area of this study was made. The literature was obtained from books, magazines, pamphlets, and consultant studies.

An interview was held with the principal of Valley High School. From this interview came a much clearer

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<sup>1</sup>Lyle L. Morris, "Equipment Procedures for New Schools," School Executives Magazine, L (May, 1931), 403.

picture of phase two. The study of the West Des Moines School District, made in the spring of 1963, by Engelhardt, Engelhardt, and Leggett, Educational Consultants, from New York, was obtained, reviewed and consulted.

The architectural firm, Savage and Ver Ploeg, was consulted to obtain changes that were made in the original floor plans of phase two, and to obtain any remarks concerning the new building.

Interviews were held with the curriculum coordinator to determine the tentative curriculum for phase two. A definite curriculum had not been established but certain changes and additions were, in all probability, going to take place.

Interviews with the principal of Stilwell Junior High School were held to gain a better overview of the entire problem of phase two.

The equipment that would actually be moved from the old building to the new building was determined and additional equipment necessary was also determined.

After determining the new curriculum, the spaces available, and the projected enrollment for phase two, the number of additional teachers necessary for phase two was determined.

From the material that was collected, a list of equipment for each room of phase two was compiled and a summary, conclusions, and recommendations were made.



#### IV. LIMITATIONS OF THE STUDY

Certain existing conditions imposed limitations on what could be done in this study.

One condition was that phase one was strictly a ninth grade unit and phase two, upon completion, was to house grades ten through twelve. Office, library, and classroom equipment had previously been specified for phase one that would remain in the new building when phase two was completed. Of the equipment at the old high school, it had to be determined which was movable and was to be used at the new building. However, at the time of this study, there was an uncertainty of the assignment of grades seven, eight, and nine between Stilwell Junior High School and the old high school building. This study was conducted on the premise that Stilwell Junior High School would continue to house grades seven and eight and that the old high school building would house a share of the eighth grade and the entire ninth grade. This uncertainty was definitely a limitation in the study of what equipment could be moved from the old building to phase two.

Another limiting factor was the style of furniture. Since certain styles of furniture had already been established in phase one, the assumption was made that phase two would follow the pattern set by phase one.

## V. DEFINITIONS OF TERMS

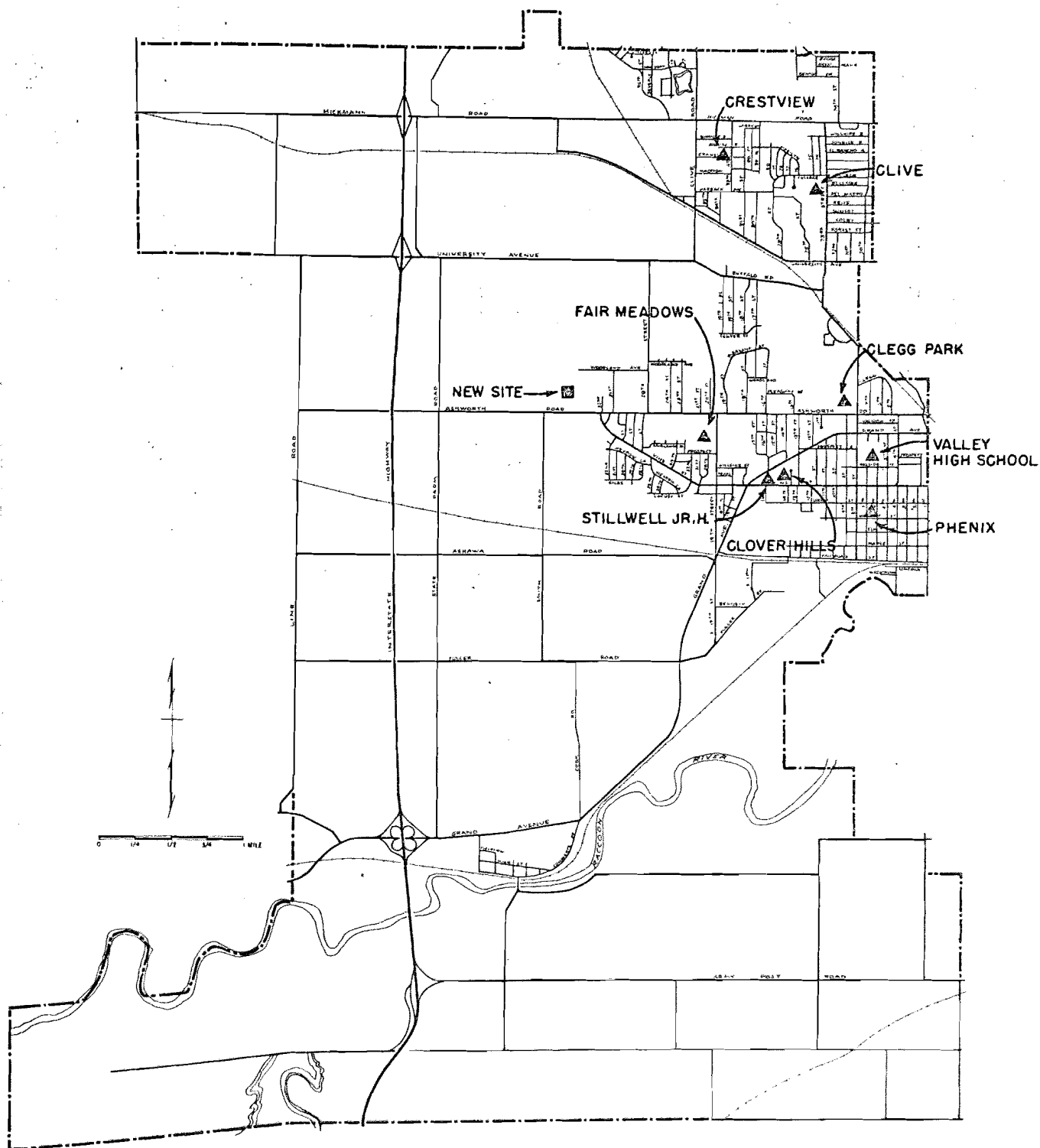
Phase one. The new high school was to be built in four phases. Phase one was the first phase to be built and was completed in 1965. Phase one was to house only ninth graders during the 1965-66, and 1966-67, school years.

Phase two. This study was primarily concerned with phase two. Phase two was to house grades ten through twelve and was structurally the same as phase one with the addition of several rooms and classrooms and a few interior changes. Phase two was to be completed in time for the 1967-68 school year.

Equipment. This study did not include classroom equipment such as maps, protractors and hand tools or expendable supplies. This study was concerned with general equipment such as, furniture for seating, working and storage, and with machines such as typewriters and power saws.

Literature concerning the equipping and staffing of new schools will be discussed in the following chapter.

A map of the West Des Moines Community School District and location of the new high school, is found on the following page.



WEST DES MOINES COMMUNITY SCHOOL DISTRICT

Figure 1. Location of New High School

## CHAPTER II

### REVIEW OF LITERATURE

The purpose of this chapter is to present what educators and other interested writers have written about the staffing and equipping of new schools. The review is divided into four sections to facilitate presentation.

#### I. IMPORTANCE OF PROPERLY EQUIPPING A NEW SCHOOL

The problem of equipping a school building, large or small, is not one to be passed over lightly. It is deserving of careful attention just as is the problem of the building itself and the two problems are almost equally complex. The cost of the equipment may be only one tenth that of the building but this fraction does not indicate its relative importance to the educational program nor does it prove that the building construction should receive ten times the attention and care.<sup>1</sup>

The preceding statements were made by Lyle Morris in 1931. Claude McGrath more recently stated:

Years ago furniture procurement for school systems was often in a hit-or-miss policy - buy whatever seemed to cost the fewest dollars, regardless of the building or the classroom in which the items were to be used.... School construction like home construction, has undergone changes. Once nailed down desks, dark walls and chairs that marred walls and woodwork were in vogue. Furniture changes have paralleled those in the business world. Decor is greatly varied. Furniture must be functional and attractive at the same time it is fairly priced.<sup>2</sup>

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<sup>1</sup>Lyle L. Morris, "Equipment Procedures for New Schools," School Executives Magazine, L (May, 1931), 403.

<sup>2</sup>Claude F. McGrath, "Annual Plant Planning and Purchasing Guide," American School and University, XXXVI (May, 1964), 44.

One question that arose in this review of literature was whether correct selection of equipment has actually been practiced in the past. Henrikson stated:

. . . problems of the future indicate that major advances have taken place in school-furniture design and that the process of change will continue. A review of the recent past makes it clear that functional and appearance changes in classroom equipment are more widespread than in any previous period of time.<sup>1</sup>

Silverthorn, who disagreed, stated:

Having visited nearly twenty recently constructed high schools in four states in the past few months, one common fault is apparent: the complete lack of coordination in room finish determination and the selection of furniture and equipment throughout the building . . .<sup>2</sup>

Most of the more recent articles on selection of school equipment were briefly but highly critical of equipment selection in the past. Perhaps the most obvious error made by planners of the past was not planning for the future. One writer said:

During past decades schools were constructed with current educational functions in mind. Little thought was given to future developments. Consequently the stereotyped stationary furniture and the meager classroom facilities changes very little in design or use during the past fifty years.

Emphasis now given to newer methods of teaching, the use of audio-visual aids, provision for individual differences of learning, use of community resources, and the multiple use of teaching personnel in all grade levels has been responsible for marked changes in school

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<sup>1</sup>B. W. Henrikson, "Present Furniture Trends Promise Exciting Future," American School Board Journal, LC (March, 1965), 26.

<sup>2</sup>Harold Silverthorn, "Aesthetic Values Being Violated," American School Board Journal, LC (March, 1965), 28.

equipment during recent years. Hence the need to anticipate further changes during future years, even decades ahead.<sup>1</sup>

Clarence Marsh stated: "The need for a factual investigation to determine minimum requirements for school furniture and equipment has been recognized for many years."<sup>2</sup>

## II. RESPONSIBILITY OF SELECTION OF EQUIPMENT

Most writers agreed that the cooperative process was the best method of equipment selection and that the equipment should be chosen by those involved in the purchasing and use of the equipment. Engelhardt stated, "Those who use a specific piece of equipment should have a major part in the determination of its purchase."<sup>3</sup> Engelhardt also supplied the following list of groups and individuals involved in the cooperative process of equipment selection and procurement.

1. School board members.
2. Superintendents of schools and their assistants.
3. Business managers and their staff.
4. Principals of schools.
5. Parent groups.

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<sup>1</sup>N. L. Engelhardt, N. L. Engelhardt, Jr., and Stanton Leggett, School Planning and Building Handbook (New York: F. W. Dodge Corporation, 1956), p. 143.

<sup>2</sup>Clarence Marsh (ed.), Specifications for Chair Desks, VI (Washington, D. C.: Reinhold Publishing, 1942), p. 111.

<sup>3</sup>Engelhardt, and others, op. cit., p. 144.

6. Supervisors, general and specific.
7. Psychologists.
8. Teachers.
9. Student groups.
10. Custodians.
11. Educational consultants.
12. Architects.
13. Engineers.<sup>1</sup>

There appeared to be some disagreement about the role of the architect in selecting equipment and furniture.

Engelhardt said that the architect should play the leading role.

The architect-he is the one who is primarily responsible for the finished classroom. Although the teachers, supervisors, principal, and superintendent will all find their own ideas incorporated into the architect's design, he is the one who gave all these ideas final form and he knows best their use possibilities. He must be prepared to discuss with the teachers, at the completion of the building, the ideas that governed him in arriving at the design of the plant. Among the points that should be brought up in this discussion are . . . the arrangement of all the movable furniture in the room and how the furniture may be moved or rearranged to meet different teaching needs . . .<sup>2</sup>

Strevell and Burke said that the architect should play a lesser role in the selection of the equipment. They said:

The selection of new instructional equipment and furniture and the utilization of available items in the

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<sup>1</sup> Ibid.

<sup>2</sup> Charles Bursch and John Reid, You Want to Build a School (New York: Reinhold Publishing Corp., 1947), pp. 90-91.

new facility are integral parts in the preparation of educational specifications for a project. It is not ordinarily a responsibility which should be delegated to the architect. Those who are responsible for educational operations should recommend what furniture and equipment are required to carry on their work effectively.<sup>1</sup>

Most authors agreed that the architect has a definite role in selecting school equipment but that his decisions should follow certain recommendations. Again, Engelhardt's words seemed to capture the dominant feeling of most authors when he said:

The architect, who is responsible for the specifications on building contracts, plays a major role in the selection of built-in educational equipment as well as of plumbing, heating, ventilating, and lighting equipment . . .

The architect is also professionally concerned with the kind of movable furniture that will be placed in the building which he plans. He knows well that school buildings designed and constructed with an excellent educational plan can be spoiled by the inclusion of furniture unsuitable to the character of the building. The architect should be given the opportunity of participating at an early stage in the selection.<sup>2</sup>

### III. GENERAL EQUIPMENT REQUIREMENTS

John Herrick and others presented this list of criteria to consider before equipment is purchased. These criteria were used in the selection of equipment for phase two. The items are not in order of importance.

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<sup>1</sup>Wallace Strevell and Arvid Burke, Administration of the School Building Program (New York: McGraw-Hill Book Company, 1959), p. 424.

<sup>2</sup>Engelhardt, and others, op. cit., 145-146.



1. Should fit the program. The new building presumably has been designed to implement an educational philosophy and program, and the equipment and furnishings should be selected with the same end in view.
2. Should be safe and healthful. Proper size to fit pupil (perhaps adjustable). Free of hazards (flame resistant drapes, no sharp instruments except where absolutely necessary, etc.). Design, material and color should blend to make a pleasing total environment.
3. Should be durable and economical. Children are hard on a school building and everything in it which they use, and the selection of equipment and furnishings should be made with this in mind.
4. Should be complete. If at all possible, a new building should be furnished completely when it is put into use because experience has shown that items not<sup>1</sup> purchased at this time may never be obtained.

In Engelhardt's requirements, the following list of equipment was given and Engelhardt suggested that every classroom contain the following equipment:

Movable pupil desks, or individual tables and chairs  
 Teacher's desk and chair  
 Four-drawer, legal-size file cabinet with lock  
 Wastebaskets, preferably of metal  
 Magazine display and storage racks  
 Group worktable  
 Bookshelving  
 Pencil sharpener  
 Flag mount, if required  
 Molding, for picture hanging  
 Overhead projector  
 Map cases are problems in social studies<sup>2</sup>

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<sup>1</sup>John Herrick, and others, From School Program to School Plant (New York: Holt Rinehart and Winston, 1956), pp. 210-213.

<sup>2</sup>N. L. Engelhardt, A Study of the West Des Moines Community School District, 1963, p. 5.

#### IV. STAFFING A NEW HIGH SCHOOL

Bernard McKenna discussed an interesting subject called "numerical staffing adequacy." McKenna contended that using classroom ratios was far too limiting and that the area of "numerical staffing adequacy" was much more appropriate for the needs of present day individual school districts.

A standard of wholesomeness has been developed, based on the average practice of a group of school districts that have made great strides in other areas related to quality education, e.g., highly qualified staff members and strong financial provisions. It provides a benchmark in which some confidence can be placed. If this rationale is used, the standard of wholesomeness becomes a numerical staffing adequacy of 68. That is, for optimum results, other things being equal, a school district might expect to need at least 68 professional employees per 1000 pupil units.<sup>1</sup>

McKenna also explained that each school would have to be considered individually, each school containing its own factors to be used in determining a "numerical staffing adequacy."

#### V. SUMMARY

The writings of educators and other interested persons have been presented in this chapter. Four main ideas have been discussed and the objectives of each are considered below.

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<sup>1</sup>Bernard H. McKenna, Staffing the Schools (New York: Bureau of Publications, Columbia University, 1965), pp. 7-8.

1. Importance of properly equipping a new school.

Proper selection of equipment for a new school is as important as any other facet in planning for a new building.

2. Responsibility for selection of equipment. A cooperative effort on the part of many people is necessary in bringing about proper selection of equipment.

3. General equipment requirements. Equipment should meet certain standards before being accepted and should fit into the budget before being considered.

4. Staffing a new school. The professional and custodial staffs should be well prepared to begin their duties in a new school. Attempts should be made to have an adequate professional staff in relationship to the student load.

In the next chapter, this study presents the equipment and teachers necessary for phase two.

## CHAPTER III

### RESULTS OF THE STUDY

The purpose of this chapter was to present the tentative curriculum for phase two, equipment to be moved from the old high school and used in phase two, new equipment to be purchased, and the number of new teachers needed for phase two.

Following are the tentative course offerings for the 1967-68 school year, according to the principal of Valley High School.

#### Tenth Grade

Speech 1 & 2  
Speech 3 & 4  
English 3 & 4  
World Community  
World History  
Geometry  
Biology  
Art 1 & 2  
Latin 1 & 2  
Latin 3 & 4  
Spanish 1 & 2  
Spanish 3 & 4  
Typing 1 & 2  
Personal Typing  
Home Economics 1 & 2  
Industrial Arts 1 & 2  
Drafting 1 & 2  
Physical Education

#### Eleventh Grade

Speech 1 & 2  
Speech 3 & 4  
English 5 & 6  
U.S. History  
Economics

Geometry  
Algebra 3 & 4  
Chemistry  
Art 1 & 2  
Art 3 & 4  
Music Appreciation  
Latin 1 & 2  
Latin 3 & 4  
Latin 5 & 6  
Spanish 1 & 2  
Spanish 3 & 4  
Spanish 5 & 6  
Typing 1 & 2  
Personal Typing  
Shorthand  
Bookkeeping  
Home Economics 1 & 2  
Home Economics 3 & 4  
Industrial Arts 1 & 2  
Industrial Arts 3 & 4  
Drafting 1 & 2  
Drafting 3 & 4  
Physical Education

Twelfth Grade

Speech 3 & 4  
English 7 & 8  
Business English  
American Government  
Modern Problems  
Sociology  
Algebra 3 & 4  
College Mathematics  
Chemistry  
Physics  
Art 3 & 4  
Art 5 & 6  
Music Appreciation  
Latin 3 & 4  
Spanish 3 & 4  
Spanish 5 & 6  
Personal Typing  
Shorthand  
Secretarial Training  
Clerical Office Practice  
Bookkeeping  
Distributive Education  
Business Law  
Home Economics 3 & 4  
Industrial Arts 3 & 4  
Drafting 3 & 4  
Physical Education

The 1967-68, course offerings are the same as those for 1966-67, with two additions; Economics in the eleventh grade and American Government in the twelfth grade.

The Engelhardt study of 1963<sup>1</sup>, revealed that the projected enrollment for grades ten through twelve during the 1966-67, school year would be 841, and for the 1967-68, school year, phase two, would be 887. However, the actual enrollment for the 1966-67, school year was 950, 109 more students than had been predicted by the Engelhardt study. The school administrators of West Des Moines then made their own predictions of the enrollment of the coming 1967-1968, school year. Their projected enrollment for the 1967-68, school year was 994, an indicated increase of 44 students over the 1966-67, school year.

On the basis of the above information, three new teachers are needed for phase two in order to absorb the two new courses and the projected increase in enrollment of 44 students.

According to several school administrators in West Des Moines, the administration and school board have always attempted to keep class sizes below thirty. However there is no written policy concerning any definite limits on class

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<sup>1</sup>N. L. Engelhardt, A Study of the West Des Moines Community School District, 1963, p. 16.

sizes nor any written policy concerning any type of "numerical staffing adequacy."

The following list includes the rooms of phase one.

- 1 Principal's Office
- 1 General office
- 2 Counselor offices
- 1 Nurse's waiting room
- 1 Nurse's office
- 2 Isolation rooms
- 1 Vault
- 1 Library
- 1 Library workroom
- 2 Conference rooms
- 1 Study hall - Lunchroom
- 2 Science rooms
- 1 Music room
- 10 Classrooms (one of which will be altered in phase two)
- 1 Teacher's workroom
- 1 Gymnasium
- 2 Locker rooms
- 2 Shower rooms
- 2 Physical Education offices
- 4 Restrooms
- 2 Storerooms

The following list includes the new rooms needed to complete phase two.

- 1 Assistant principal's office (part of phase one classroom)
- 3 Counselor offices (part of a phase one classroom)
- 1 Waiting room (part of a phase one classroom)
- 1 Main shop
- 1 Finish room (shop)
- 1 Planning room (shop)
- 1 Dust room (shop)
- 1 Mechanical drawing room
- 1 Craft room
- 1 Ceramic room
- 1 Art room
- 1 Band and vocal room
- 5 Practice rooms (music)
- 1 Music library room
- 6 Classrooms
- 1 Chemistry room
- 1 Physics room
- 1 Home economics room
- 1 Language room (laboratory)
- 1 Distributive education room
- 2 Typing rooms
- 1 Secretary training room

- 5 Teacher's offices
- 1 Dark room
- 2 Student study rooms
- 1 Shorthand room
- 1 Bookkeeping room
- 1 Business machine room
- 1 Teacher's lounge
- 6 Storage rooms
- 4 Rest rooms

Flexible classroom programs of today call for flexible classroom equipment. Movable pupil desks, tables, and chairs are necessary for flexibility. Group worktables within a classroom offer greater flexibility for discussions and teaching methods. The overhead projector, being faster and more versatile than a blackboard can be used as an alternate in each classroom. Flexible teaching is more likely to exist if complimented with flexible equipment.

The new rooms of phase two will contain all new equipment with the exception of the distributive education room, drafting room and music room. Following is a list of the new rooms of phase two and the equipment to be included in each.

The sizes of the various pieces of equipment have been previously established as sizes desired by the West Des Moines School System.

The shop contains 120 box lockers to accommodate 120 students. The practice in Valley High School has been to limit shop class sizes to 20 students for safety purposes. The school day consists of 6 periods for a maximum of 120 students. There are 60 project storage areas, each to be used by two students.



Main Shop

- 120 box lockers (8 units of 15 lockers each; each locker 18" x 21" x 10")
- 60 project storage areas (each 3' x 3' x 3')
- 2 machine benches (2' x 12' each)
- 1 soldering bench (30" x 60" top)
- 1 electric bench (48" x 96" top)
- 1 moulding bench (2' x 5' top)
- 1 circular wash fountain (4½' diameter)
- 6 woodworking benches (54" x 64" top; 4 station w/vises)
- 3 metalworking benches (3' x 7' top)
- 5 grinders (7", heavy duty, bench type w/eye shields)
- 1 buffer (8")
- 2 milling machines (1 horizontal, 1 vertical)
- 2 drill presses (1-18", 1-25")
- 1 squaring shear (16 gauge maximum for mild steel)
- 1 brake w/stand (16 gauge maximum for mild steel)
- 1 welding booth (2 station, arc and gas)
- 1 portable welder (combination welder, on wheels)
- 1 anvil (100#)
- 1 heat furnace (1300-2400 degrees)
- 5 metal lathes (1-14", 4-10")
- 1 jointer (8" long bed)
- 1 planer (18" x 6")
- 1 sanding machine (14", tilting disc type)
- 2 jigsaws (24" x 5")
- 2 bandsaws (1-14", 1-20")
- 1 circular saw (10")
- 1 radial arm saw (12"-14")
- 4 wood lathes (12", 4 speed)

Finish room

- 1 finishing table (3' x 6')
- 1 spray booth (4' x 5')

Planning room

- 3 tables (4' x 8')
- 24 chairs (6-15", 18-17")

Instructor's office

- 1 teacher desk (30" x 60")
- 2 side chairs w/arms
- 2 filing cabinets (4 drawer)
- 1 drafting table (3' x 6')
- assorted bookshelves

Lumber storage room

assorted lumber racks

Metal storage room

assorted metal and sheet metal racks

Mechanical drawing room

all equipment moved from old building

Dust room (left vacant)Chemistry room

3 chemistry tables w/sinks (13' x 4 $\frac{1}{2}$ ', 10 students each)  
 30 stools, (24"-35" adjustable)  
 30 student desks (15-15", 15-17")  
 4 tall, glass front storage cabinets  
 1 instructor's table w/sink  
 2 counter sinks  
 2 fume hoods (portable)  
 assorted cabinets and storage

Storage room (Chemistry)

1 cart  
 1 counter sink  
 assorted cabinets and storage

Office (Chemistry)

1 teacher desk (30" x 60")  
 1 side chair w/arms  
 1 filing cabinet (4 drawer)  
 3 counter sinks  
 wardrobe  
 assorted cabinets and storage

Physics room

10 interlocking tables (30" x 72", 3 students each)  
 1 instructor's table w/sink  
 3 counter sinks  
 assorted cabinets and storage  
 30 stools (24"-35" adjustable)

Storage room (physics)

- 1 tall, glass front cabinet

Office (physics)

- 1 teacher desk (30" x 60")
- 1 side chair w/arms
- 1 filing cabinet (4 drawer)
- 1 counter sink
- wardrobe
- assorted cabinets and storage

5 General classrooms

- 150 student desks (15-15", 15-17" in each classroom)
- 5 teacher desks (30" x 60")
- 5 side chairs w/arms
- 5 filing cabinets (4 drawer)

Home economics room

- 1 teacher desk (30" x 60")
- 1 side chair w/arms
- 1 filing cabinet (4 drawer)
- 1 washing machine
- 1 clothes dryer
- 2 easy chairs
- 1 sofa
- 1 end table & lamp
- 1 coffee table
- 6 double sinks
- 6 ranges
- 6 sewing and all-purpose tables (4' x 4' w/2' drop leaf)
- 1 ironing and cleaning table (2' x 8')
- 1 grooming table
- 1 display case
- 1 bookcase
- carpeting (10' x 10')
- assorted cabinets and storage

2 Student study rooms

- 4 tables (3' x 6', 2 in each room)
- 40 student chairs (10-15", 10-17" in each room)

Language laboratory

- 1 teacher desk ( 30" x 60")
- 1 side chair w/arms
- 1 electronic language lab teaching console w/32 pupil stations
- 32 student chairs (16-15", 16-17")

Distributive education room

all equipment to be moved from old building

Office (distributive education)

- 1 teacher desk (30" x 60")
- 1 side chair w/arms
- 1 filing cabinet (4 drawer)
- 1 display case
- 4 waiting chairs (same type as teacher chair)

2 Typing rooms

- 80 typing tables (18" x 32" top)
- 80 typing chairs (adjustable height)
- 80 manual typewriters (floor mounted electrical outlets for future electric typewriters)
- 2 teacher desks (30" x 60")
- 1 counter sink
- 1 bookcase
- 2 side chairs w/arms
- assorted cabinets and storage

Shorthand room

- 35 L-shaped tables (combination typewriter-dictation)
- 35 student chairs (25-15", 10-17")
- 1 teacher desk (30" x 60")
- 1 side chair w/arms
- 1 filing cabinet (4 drawer)
- 1 bookcase

Secretary training room

- 30 L-shaped tables (combination typewriter-dictation)
- 30 student chairs (24-15", 6-17")
- 1 teacher desk (30" x 60")
- 1 side chair w/arms
- 1 filing cabinet (4 drawer)
- 1 bookcase

Bookkeeping room

- 32 bookkeeping tables (2' x 3' top)
- 32 student chairs (20-15", 12-17")

Business machine room

- 1 counter sink
- assorted cabinets and storage

Art room

9 double-easel tables (each 48" x 84", 2 station)  
18 student chairs (9-15", 9-17")  
1 display case  
1 spatter booth  
2 double sinks  
1 teacher desk (30" x 60")  
1 side chair w/arms

Crafts room

12 worktables (each 42" x 60", 2 stations)  
24 student chairs (12-15", 12-17")  
1 spatter booth  
1 display case  
2 double sinks  
1 teacher desk (30" x 60")  
1 side chair w/arms  
assorted cabinets and storage

Ceramic room

1 kiln  
assorted cabinets and storage

Dark room

1 double sink  
assorted cabinets and storage

Storage room (art)

assorted cabinets and storage

Band and vocal room

folding chairs (as needed)  
cabinets and storage to be moved from old building

Office (music)

2 teacher desks (30" x 60")  
2 side chairs w/arms  
1 sink  
1 work counter

Music library

1 study table (3' x 6')  
8 student chairs (4-15", 4-17")  
assorted cabinets and bookshelves

Physical education locker rooms

additional lockers as needed

Teacher lounge

1 sofa  
 3 easy chairs  
 1 coffee table  
 1 wardrobe  
 1 counter sink  
 assorted cabinets

Assistant principal's office

1 office desk (36" x 72")  
 1 swivel chair w/arms  
 3 guest chairs (side chairs w/arms)  
 1 filing cabinet (4 drawer)  
 cabinets and storage

3 Guidance counselor offices

3 teacher desks (30" x 60")  
 3 swivel chairs w/arms  
 3 guest chairs (side chairs w/arms)  
 3 filing cabinets (4 drawer)  
 cabinets and storage

Waiting room

4 guest chairs (side chairs w/arms)

Following are totals of general equipment needed in  
 the new rooms of phase two.

364 Chairs

32 side chairs w/arms  
 5 easy chairs  
 4 swivel chairs w/arms  
 243 student chairs (136-15", 107-17")  
 80 typing chairs (adjustable height)

203 Desks

22 teacher desks (30" x 60")  
 1 office desk (36" x 72")  
 180 student desks (90-15", 90-17")

221 Tables

80	typing tables (18" x 32" top)
65	L-shaped tables (combination typewriter-dictation)
8	study tables (3-4' x 8', 5-3' x 6')
32	bookkeeping tables (2' x 3')
9	double easel table (48" x 84", 2 station)
12	craft tables (42" x 60", 2 station)
3	chemistry tables
10	physics tables
2	coffee tables
22	filing cabinets (4 drawer)
15	counter sinks
11	double sinks
60	stools (24"-35" adjustable)
4	display cases

The following chapter will include a summary, conclusions and recommendations.

## CHAPTER IV

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### I. PROBLEM

The purpose of this study was to (1) determine how the new Valley High School of West Des Moines, Iowa, would be equipped and (2) determine how the new school would be staffed. The writer realized the magnitude of the problem of staffing and equipping a new school. Therefore, this study attempted only to provide information concerning additional equipment and new teachers that appeared necessary for phase two.

#### II. SUMMARY

A survey of related literature was carried out by the writer to determine past and present attitudes and ideas of authors in the area of school equipment and staffing. This review of literature revealed that authors, past and present, generally agreed on the great importance of properly staffing and equipping a new school and the care that should be exercised in such an undertaking. Revealed also was the awareness by each author of the shortcomings of his respective era in the processes of completing new schools. Many problems discussed by authors of years ago have today been solved. However, many of the old problems still remain with the new and different problems joining them.



Interviews were held with the Valley High School principal, Savage and Ver Ploeg Architectural Firm, the principal of Stilwell Junior High School, and the West Des Moines Curriculum Coordinator. These interviews produced a much clearer picture of phase two and made available most of the information used in Chapter III.

This study did not become involved in the cost or style of various pieces of equipment, nor did it become involved with smaller pieces of equipment that are used in classrooms as teaching aids or are expendable.

### III. CONCLUSIONS

On the basis of the information presented in this particular study, the following conclusions have been reached:

1. Most writers in the area of selection of equipment were aware of the importance of careful selection and very similar in their methods of carrying out these selections.
2. At least lip service has been given in the past to the importance of school equipment and actual practice of properly equipping schools has been improving with most new schools.
3. Three new teachers appeared necessary upon consideration of the expected curriculum and projected increased enrollment.

#### IV. RECOMMENDATIONS

Based on the foregoing conclusions, the following recommendations were presented:

1. That a definite school program be determined before trying to determine furniture needs.
2. That the teachers have more to say in the selection of new equipment to be used in their classrooms.
3. That a study should be conducted in the area of audio-visual equipment in the classrooms of Valley High School and recommendations made concerning audio-visual equipment needed in each classroom.
4. That a follow-up study be made of the remaining phases to be built at Valley High School.

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